

Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed October 6, 2005.

Claims 1-54 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-5, 8-12, 15-18, 21-25, 28-31, 34-38, 41-45 and 48-52. Claims 6, 7, 13, 14, 19, 20, 26, 27, 32, 33, 39, 40, 46, 47 53 and 54 are objected to. The present response cancels claims 13, 14, 19, 20, 26, 27 and 32-54, amends claims 1, 3-8, 10-12, 15, 17, 18, 21, 23-25, 28, 30 and 31, and add claims 55-59. Reconsideration of the rejections is requested.

I. REJECTION UNDER 35 U.S.C. §102(B) OVER *MORAN, ET AL.* (U.S. PATENT 6,738,205)

Claims 1-5 and 34-38

The Examiner rejected Claims 1-5 and 34-38 under 35 U.S.C. §102(e) as being anticipated by *Moran*. Applicant requests cancellation of claims 34-38. Applicant respectfully traverses the rejection of claims 1-5.

The Examiner writes “Regarding claims 1 and 4, Moran et al disclose a template pattern... comprising...a plurality of zig-bursts (51, 52), each zig-burst forming a variable angle relative to the plurality of pulses (column 12, lines 35-37), and a plurality of zag-bursts (51, 52), each zag-burst forming a negative chevron angle relative to the plurality of pulses....Moran et al further disclose a template pattern wherein the variable angle at the second end is a chevron angle and the variable angle at the first end is less than the chevron angle (column 12, lines 35-40). Moran et al show that the chevron angle can vary by increasing continuously, having an increased angle of separation towards the outer diameter of the disk.” See OA, page 2, number 3.

As cited by the Examiner, *Moran* does describe “the angle between the transverse segments 52 (and 51) can increase from the center of the disk...towards the periphery of the disk” (col. 12, lines 37-40); however, *Moran*’s teachings are vague, and do not particularly describe varying one of the zig-bursts and zag-bursts while maintaining the other at a substantially consistent angle. In fact, *Moran* implicitly describes varying both the zig-burst angle and the zag-burst angle equally, in a mirrored fashion. For example, *Moran* “In FIG. 9A, in one example operation, the head 34 moves down the read track 60...the head 34 crosses over a first suppressed segment 51 in the B Zig group 76 and then a second suppressed segment 51 in the C Zag group 76 at an opposite angle relative to the first suppressed segment” See Col. 14, lines 31-47. While *Moran* does state that this is “one example”, *Moran* does not provide any example where one of the zig-burst and the zag-burst vary, while the other remains substantially constant. Such a method would violate the condition stated by *Moran* the suppressed segment in the zag group is “at an opposite angle relative to the first suppressed segment.”

Further support for this position can be found where *Moran* states (in reference to FIG. 6), “each pattern includes...two transverse slanted field/segments 52...with approximately equal but opposite sign angles.” See Col. 9, lines 34-38. Again, nowhere does *Moran* describe, or teach or suggest varying one of the zig-burst and the zag-burst vary, while the other remains substantially constant. It is therefore implicitly true that *Moran* only describes varying the zig-angle and the zag-angle in equal but opposite directions to produce an “angle between the transverse segments 52 (and 51) can increase from the center of the disk...towards the periphery of the disk” as recited in column 12, lines 35-40 cited by the Examiner.

Because *Moran* fails to describe, or even teach or suggest a template pattern “a plurality of zig-bursts extending from the first end to the second end, the zig-bursts forming a zig angle relative to the plurality of pulses, the zig angle varying along at least a portion of the plurality of zig-bursts; and a plurality of zag-bursts extending from the first end to the second end, the zag-bursts forming a zag angle relative to the plurality of pulses, the zag angle being a chevron angle” as recited in claim 1, *Moran* fails to anticipate claim 1.

Dependent claims have at least the features of the independent claims from which they depend. Therefore, *Moran* fails to describe, or even teach or suggest all of the features of claims 2-5 (which ultimately depend from claim 1), and therefore cannot anticipate claims 2-5 obvious under 35 U.S.C. §102(e).

It should be noted that Applicant has made various amendments to the claims. These amendments were submitted to improve the precision of the wording of the claim, rather than in response to the cited prior art. It is submitted that the scope of the claim is not intended to be narrowed by the amendments.

II. REJECTION UNDER 35 U.S.C. §103(A) OVER *MORAN, ET AL.* (U.S. PATENT 6,738,205)

Claims 8-12, 15-18, 21-25, 28-31, 41-45 and 48-52.

The Examiner rejected claims 8-12, 15-18, 21-25, 28-31, 41-45 and 48-52 under 35 U.S.C. §103(a) as being unpatentable over *Moran*. Applicant requests cancellation of claims 41-45 and 48-52. Applicant respectfully traverses the rejection of claims 8-12, 15-18, 21-25 and 28-31.

In the Office Action, the Examiner writes

Moran et al fail to explicitly show a template pattern wherein the variable angle at the first end is a zero and the variable angle at the second end is a chevron angle. However, Moran et al show that the chevron angle can vary by increasing continuously, having an increased angle of separation towards the outer diameter of the disk. Moran et al discloses that an angle may vary within a range of 20 degrees to 40 degrees from a first end to a second end. It is considered that making the angle of the first

end equal to zero would merely be changing the range disclosed by Moran et al and holds no patentable weight because it is not inventive to discover the optimum or workable ranges by routine experimentation (see *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

For the reasons given above in Section I, Applicant submits that claims 8, 15, 21 and 28 do not merely change the range disclosed by *Moran*, because *Moran* further requires that the zig-burst angle and zag-burst angle substantially mirror one another. Claims 8, 15, 21 and 28 describe varying one of a zig-burst angle and a zag-burst angle while maintaining the other of the zig-burst angle and zag-burst angle substantially constant.

Nowhere does *Moran* teach or suggest “a plurality of zig-bursts extending from the first end to the second end, the zig-bursts forming a zig angle relative to the plurality of pulses, the zig angle varying along at least a portion of the plurality of zig-bursts; and a plurality of zag-bursts extending from the first end to the second end, the zag-bursts forming a zag angle relative to the plurality of pulses, the zag angle being a chevron angle” as recited in claim 8, “a plurality of zig-bursts disposed along the stroke, the zig-bursts forming a zig angle relative to the plurality of pulses, the zig angle varying along at least a portion of the plurality of zig-bursts; and a plurality of zag-bursts disposed along the stroke, the zag-bursts forming a zag angle relative to the plurality of pulses, wherein the zag angle is a chevron angle” as recited in claim 15, “a plurality of zig-bursts extending from the first end to the second end, the zig-bursts forming a zig angle relative to the plurality of pulses, wherein the zig angle is a chevron angle; and a plurality of zag-bursts extending from the first end to the second end, the zag-bursts forming a zag angle relative to the plurality of pulses, the zig angle varying along at least a portion of the plurality of zig-bursts” as recited in claim 21, or “a plurality of zig-bursts extending from the first end to the second end, the zig-bursts forming a zig angle relative to the plurality of pulses, wherein the zig angle is a chevron angle; and a plurality of zag-bursts extending from the first end to the second end, the zag-bursts forming a zag angle relative to the plurality of pulses” as recited in claim 28; therefore, *Moran* cannot render claims 8, 15, 21 and 28 obvious under 35 U.S.C. §103(a).

Dependent claims have at least the features of the independent claims from which they depend. Therefore, *Moran* fails to teach or suggest all of the features of claims 9-12 (which ultimately depend from claim 8), claims 16-18 (which ultimately depend from claim 15), claims 22-25 (which ultimately depend from claim 21) and claims 29-31 (which ultimately depend from claim 28), and therefore cannot render claims 9-12, 16-18, 22-25 and 29-31 obvious under 35 U.S.C. §103(a).

It should be noted that Applicant has made various amendments to the claims. These amendments were submitted to improve the precision of the wording of the claim, rather than in response

to the cited prior art. It is submitted that the scope of the claim is not intended to be narrowed by the amendments.

III. ALLOWABLE SUBJECT MATTER

Claims 6, 7, 13, 14, 19, 20, 26, 27, 32, 33, 39, 40, 46, 47, 53 and 54

Applicant appreciates the indication that claims 6, 7, 13, 14, 19, 20, 26, 27, 32, 33, 39, 40, 46, 47, 53 and 54 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In view of the remarks above in Section I and II, it is submitted that such claims do not depend from unpatentable base claims. Applicant therefore requests removal of the objection.

IV. CONCLUSION

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: 1/6/06

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